Modeling Quarterly Review Meeting
Watershed Modeling

August 9, 2016
CBPO Conference Room - The Fish Shack
410 Severn Avenue Annapolis, MD 21403
For Remote Access:
Adobe Connect: https://epawebconferencing.acms.com/modeling (enter as guest)
Conference Line: (866)-299-3188 code 410-267-5731#
Event webpage: http://www.chesapeakebay.net/calendar/event/23598/

10:00 Announcements and Amendments to the Agenda – Dave Montali, WVDEP and Lee Currey, MDE

10:05 Phase 6 Watershed Model Schedule Update – Lee Currey, MDE and Dave Montali, WVDEP
Lee and Dave will present an updated Phase 6 development schedule with links to the 2017 Midpoint Assessment schedule. Upcoming *Beta* releases of Phase 6 with their schedules, as well as the scheduled peer review of the Phase 6 Model, will be discussed.

10:30 Summary of Phase 6 Progress Over Last Quarter - Gary Shenk, USGS and Gopal Bhatt, PSU
The overall progress of the Phase 6 Model including the schedule of the *Beta* 3 comment and review period and webinar will be described.

10:40 Phase 6, Beta 3 Calibration – Gopal Bhatt, PSU and Gary Shenk, USGS
The completed Phase 6 *Beta* 3 version will be reviewed. Improved representation of land use targets, automated water quality calibration in HSPF reaches, rSAS representation, and first application of Phase 6 in scenario mode are all features of the *Beta* 3 version. The next step in the *Beta* 3 release is a webinar planned for the week of August 15.

11:45 STAC Workshop Recommendations on Climate Change Simulation – Lew Linker, EPA-CBP
Key Climate Change Workshop recommendations relevant to the Modeling Workgroup's simulation of climate change will be discussed.

12:00 LUNCH

1:00 Climate Change Simulation Approach – Gopal Bhatt, PSU and Kyle Hinson, CRC

The status of the application of the Phase 6 Watershed Model to the representation of Conowingo infill will be described.

1:45 Mass Balance Estimate for Ammonia Emission Controls – Gary Shenk, USGS and Lew Linker, EPA-CBPO

An approach to decrement the captured ammonia emission loads applied to the landscape for avoided air nitrogen loads to tidal Chesapeake waters will be described

2:15 ADJOURN

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Estuarine & Ecosystem Modeling

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10:05 WQSTM Calibration to the Phase 6 *Beta* 2 Loads – Carl Cerco, U.S. CoE ERDC
The Water Quality and Sediment Transport Model (WQSTM) calibration to the Phase 6 *Beta* 2 loads will be examined in detail. Sensitivity studies of organic (G1, G2, and G3) reactivity rates will be discussed and insights into how the information from Conowingo research and monitoring program, particularly the improved G1, G2, and G3 estimates can be utilized by the WQSTM will also be offered.

11:00 Progress in the Simulation Shallow Water Processes and Tidal Wetlands – Carl Cerco, U.S. CoE ERDC
Progress in developing an improved representation of shallow water in the Water Quality and Sediment Transport Model (WQSTM) will be presented as well as progress in the simulation of tidal marsh attenuation of nitrogen, phosphorus, and sediment.

11:30 WQSTM Sensitivity Scenarios – Lew Linker, EPA - Ping Wang, VIMS - Richard Tian, UMCES
Sensitivity scenarios roughly representing the high load condition of 1985, the low load condition of all-forest, and the intermediate loads of 2009 and the Phase II WIPs will be reviewed for relative differences in the response to nutrient loads between the 2010 WQSTM and the current WQSTM calibration under development.

12:00 LUNCH

1:00 Nutrient Limitation Assessment – Richard Tian, UMCES – Ping Wang, VIMS
An initial assessment of tidal Chesapeake nutrient limitation based on observed data, the 2010 version of the QWSTM, and the latest version of the WQSTM will

be presented. Time series and seasonal nutrient and light limitation data will be presented from 1991 to 2000 for each of the three sources.

1:30 Sediment Composition and Diagenesis – Jeff Cornwell, UMCES
Characterization of the composition of Conowingo sediments in long and short cores, the estimated reactivity of their organic material, and their estimated biogeochemical fate in tidal water deposition will be described and measured sediment nutrient flux rates of Conowingo sediment will be discussed.

1:50 Lower Susquehanna River Impoundment Modeling Studies – Jim Fitzpatrick and Mark Velleux (HDR)
Final outputs from a sediment and nutrient mass balance model of Conowingo Pool called the Conowingo Pool Mass Balance Model (CPMBM) will be presented and the integration with the Phase 6 Watershed Model will be discussed.

2:20 Expanded and Improved Estimates of Nitrogen Wet Deposition Loads – Jeff Grimm, PSU
Jeff will review the final refined assessment of hourly wet deposition estimates from 1985 to the present and provide a schedule for the final report.

2:45 ADJOURN